REMARKS/ARGUMENTS

The Examiner is thanked for the Official Action dated December 8, 2009. This amendment is intended to be fully responsive thereto.

Specification has been amended to specify that the gear drive (78) is a two stage reversible reduction gear drive. Support for this amendment could be found in Figs. 6 and 7, and in page 10, lines 2-8 of the present application. No new matter has been added.

Claims 1, 4 and 12 have been amended to correct minor informalities. No new matter has been added.

Claims 1, 4-8 and 22-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Barrett (US 2,823,546) in view of Temma et al. (US Pat Pub. 2002/0183149). Applicant respectfully disagrees. However, in order to expedite the prosecution of the present application, claim 1 has been amended to specify that the elastic means (30) is a torsional elastic means housed within the movable supporting member (15). The support for this amendment could be found in page 5, lines 19-24 of the present application. No new matter has been added.

Claim 1 has been further amended to specify that the actuating means (81) further comprising a mechanical drive including a two stage reversible reduction gear drive (78). The support for this amendment could be found in page 10, lines 2-8, and Figs. 6 and 7 of the present application. No new matter has been added. Claims 4, 6 and 8 have been accordingly amended. No new matter has been added.

Claim 1 has been also amended to specify that the rotary member (10) is drivingly connected to the pump (7). The support for this amendment could be found in page 4, lines 6-8, and Fig. 1 of the present application. No new matter has been added.

Claim 1 has been further amended to specify that the torsional elastic means (30) exerts a rotational force on the movable supporting member (15). The support for this amendment could be found in page 7, lines 3-8, and Figs. 2 and 3 of the present application. No new matter has been added.

The Examiner erroneously alleges that the spring (elastic means) 16 of Barrett exerts a force on the movable fork 11 (interpreted by the Examiner as the supporting member) so that the rubber roller 13 (interpreted by the Examiner as the drive wheel) drivingly contacts the starter motor 1 (apparently the Examiner meant the steel roller 14 of the starter motor 1) (interpreted by the Examiner as a rotary member of the pump) and an engine flywheel 20 (interpreted by the Examiner as the drive member) powered by the combustion engine (1) to drive the rotary member (1 or 14).

First, the spring 16 of Barrett is a compression elastic means, not torsional, as recited in claim 1.

Second, the compression spring 16 of Barrett is provided for increasing friction between the frictionally cooperating faces of the roller 14 and the lever 4 so that when the starter motor 1 is switched on a dragging action is applied to arm 4 (see col. 2, lines 42-46). As disclosed by Barrett, the compression spring 16, the frictionally cooperating faces of the roller 14 and the lever 4 constitute a friction clutch means between the driving wheel and the

lever arrangement (see col. 2, lines 29-32). In other words, the compression spring 16 of Barrett exerts a compression force to the steel roller 14 of the starter motor 1 (see Fig. 2 of Barrett), not the rotational force on the fork 11 (movable supporting member), as recited in claim 1.

According to the present invention, the torsion spring applies a torque to maintain the drive wheel contacting the rotary member whether the drive assembly is switched on or off. In other words, Barrett fails to disclose the torsional elastic means exerting a rotational force on the movable supporting member so that the drive wheel drivingly contacting the rotary member and a drive member to drive the rotary member. This is a major advantage during switching-on transients wherein there is no slipping between the rotary member and the drive wheel of the present invention. No slipping reduces friction material consumption and increases working life of the drive assembly.

Third, Barrett fails to disclose the torsional elastic means housed within the movable supporting member, as recited in claim 1. As clearly shown in Fig. 2, the spring (16) of Barret is mounted in open air environment, requiring a considerable axial space, and outside the fork 11 interpreted by the Examiner as the supporting member. According to the present invention as recited in claim 1, the configuration is more compact and the spring is protected from contaminants.

Fourth, Barrett fails to disclose a drive member powered by the combustion engine to drive the rotary member drivingly connected to the pump, as recited in claim 1.

Fifth, those skilled in the art would not possibly interpret the engine flywheel 20 of Barrett as the drive member powered by the combustion engine to drive the rotary member. As clearly disclosed by Barrett, the disclosed "coupling for the transmission of the rotary motion" is provided for starting the internal combustion engine; specifically, for rotating the engine flywheel 20 (i.e., the driven or rotary member) by the steel roller 14 of the starter motor 1 (i.e., the drive member) through the idle roller 13 (the drive wheel). In other words, the steel roller 14 of the starter motor 1 drives the engine flywheel 20 during the starting operation, not the other way around.

The above arguments clearly show that the purpose, structure and the principles of operation of Barrett are considerably different from those of the present invention as recited in claim 1. Moreover, as clearly disclosed by Barrett and shown in Fig. 1, the spring 18 is specifically provided to bias the drive wheel 13 away from the flywheel 20. Contrary to Barrett, the drive assembly recited in claim 1 provides the torsional elastic means (30) exerting a rotational force on the movable supporting member so that the drive wheel drivingly contacting the rotary member and a drive member. Claim 1 further recites that the rotational force is exerted by the elastic means to push the drive wheel against the rotary member and the drive member. In other words, the coupling device of Barrett teaches away from the present invention as recited in claim 1.

The Examiner concedes that Barrett fails to disclose the actuating means provided to exert a force in opposition to that exerted by the elastic means (helical spring 16) to detach the drive wheel from at least one of the rotary member and the drive member, and a reversible electric motor such that a force exerted by the elastic means to push the drive wheel against the rotary member and the drive member is greater than the travel resistance of

the actuating means when maintained in a disabled rest condition. The Examiner then alleges that Temma discloses a tensioner 50 having the tension roller (51) supported on the swing arm (53), a compression spring (54), and an electric motor (55) that can be activated to exert a force in opposition to that exerted by the compression spring (54). The Examiner further alleges that it would have been obvious to one of ordinary skill in the art to modify the drive assembly of Barrett to include the actuating means as taught by Temma "for purpose of providing a controllable means for selectively engaging and disengaging the rotary member".

First, Barrett teaches the automatic coupling for a starter motor, while Temma discloses a tension-adjusting unit (50) for tensioning the belt of a stepless speed change unit (see figures 3 - 5). The tensioner (50) of Temma includes the tension roller (51) that is permanently maintained by the compression spring (54) in contact with the belt 15. Motor (55) has only the function of increasing or decreasing the belt tension as a function of torque or transmission ratio (see paragraphs (0064) and (0067)). Thus, the Examiner's modification of Barrett in view of Temma is improper because in order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. In other words, to rely on the reference under 35 U.S.C. 103, it must be analogous prior at. MPEP 2141.01(a). In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). Clearly, Barrett that discloses the automatic coupling for a starter motor is not analogous to the claimed invention that recites the drive assembly for a water pump and Temma that teaches the belt tensioner (50).

Second, those skilled in the art would readily realize that Barrett and Temma disclose significantly different types of devices which cannot be combined as the principles of

operation thereof are considerably different. Combination of prior art with different principles of operation is impermissible. See MPEP 2143.01.VI. It should be noted that claim 1 requires that the force exerted by the motor is in opposition to that exerted by the elastic means to detach the drive wheel from at least one of the rotary member and the drive member. Contrary to the present invention, the actuation of the starter motor 1 of Barrett engages the rubber roller with the flywheel 20. Therefore, Barrett teaches away from the present invention as claimed. Moreover, the actuating means of Temma in the context of Barrett would simply not work. In fact, Barrett teaches to automatically couple a drive wheel to an electric motor when the motor is started, and automatically decouple the drive wheel from the electric motor when the latter is stopped. Therefore, if the tensioner (50) of Temma was applied to the roller 14 of Barrett, then the electric motor (55) of Temma would simply vary the tension of the compression spring (16) of Barrett without detaching the roller (13) of Barrett from the flywheel (20) or the steel roller 14 of the starter motor 1. Moreover, the modification of Barrett in view of Temma is improper because the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352.).

Third, as stated in the Supreme Court decision of *KSR Int'l Co. v. Teleflex Inc.*: " patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in

most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." (emphasis added). ***KSR v. Teflex***, 550 U.S.____, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007). The Examiner alleges that the reason to modify the assembly of Barrett to include the actuating means of Temma is "for purpose of providing a controllable means for selectively engaging and disengaging the rotary member". However, the automatic coupling for a starter motor of Barrett already discloses "a controllable means for selectively engaging and disengaging the rotary member" in the form of the roller (13) and the friction clutch (the compression spring 16, the frictionally cooperating faces of the roller 14 and the lever 4). Therefore, the actuating means of Temma in the context of the coupling device of Barrett would be absolutely ineffective and inadequate. Clearly, the prior art provides no logical reason, suggestion or motivation to combine teachings of Barrett and Temma.

Furthermore, Temma refers to the tensioner (50) for tensioning the belt of a stepless speed change unit (see figures 3 - 5). The tensioner (50) of Temma includes the tension roller (51) that is permanently maintained by the compression spring (54) in contact with the belt 15. Motor (55) has only the function of increasing or decreasing the belt tension as a function of torque or transmission ratio (see paragraphs (0064) and (0067)). Therefore, this reference does not anticipate the feature that the actuating means can be activated to detach the tension roller (51) from the belt (15). In particular, paragraph [0064] clearly states that "the aforementioned spring 54 supplies initial tension. The assist motor is normally or reversely driven for adding or subtracting tension caused by the assist motor 55 to or from the initial tension so that the optimum belt tension can be obtained" (emphases added). Thus, Temma clearly discloses that the tension roller (51) is continually pushed by the compression spring (54) to maintain the belt (15) under constant tension and the tension roller (51) is never

detached from the belt (15). Therefore, contrary to the Examiner's allegations, those skilled in the art would readily realize that the tension roller (51) is always kept in contact with belt (15) and that the electric motor (55) only modulates the belt tension. If the tension roller (51) was detached from belt (15), it would not perform its technical function, i.e. to ensure the desired belt tension. MPEP 2143.01(V) expressly states that a proposed modification of a prior art invention cannot render that invention "unsatisfactory for its intended purpose."

Temma also fails to disclose the torsional elastic means housed within the movable supporting member. The spring (54) of Temma is a compression spring and is not housed within the movable supporting member.

Moreover, Temma fails to disclose the actuating means comprising a mechanical drive including a two stage reversible reduction gear drive. As clearly shown in Fig. 5 of Temma, the tensioner (50) includes a single stage reversible reduction gear drive. The tension spring (54) of Temma has a considerable lever arm to reverse the one stage meshing between pinion (56) and arcuate gear (53b) (see Figs. 4 and 5 of Temma). According to the present invention as recited in claim 1, the mechanical drive includes a two stage reversible gear drive, and the motor is coupled with the torsional spring. Such a configuration is much more compact that disclosed in Temma. Furthermore, Temma discloses that to reverse the one stage gearing a spring with a considerable arm is needed. A two stage reversible gearing has a considerably higher internal friction than a reversible single stage gearing. Therefore, Temma teaches to the contrary with respect to the present invention, wherein a torsion spring is coupled to a reversible two stage gearing.

Therefore, even if the combination of Barrett and Temma suggested by the Examiner could be made, the resulting drive assembly still would lack the rotational force means exerting a rotational force on the movable supporting member so that the drive wheel drivingly contacts the rotary member and the drive member powered by the combustion engine to drive the rotary member drivingly connected to said pump, the torsional elastic means housed within the movable supporting member, and the actuating means provided to exert a force in opposition to that exerted by the elastic means to detach the drive wheel from at least one of the rotary member and the drive member, wherein the actuating means comprise a reversible electric motor such that a force exerted by the torsional elastic means to push the drive wheel against the rotary member and the drive member is greater than the travel resistance of the actuating means when maintained in a disabled rest condition, and further comprise a mechanical drive including a two stage reversible reduction gear drive.

In view of the above, Barret and Temma are not combinable and, even if the combination of Barrett and Temma suggested by the Examiner could be made, the present invention as recited in claim 1 would not stem from the combination of Barret and Temma. Moreover, since several significant features of claim 1 are not disclosed in any of the cited references, the rejection of claims 1, 4-8 and 22-26 under 35 U.S.C. 103(a) over Barrett and Temma is improper.

Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Barrett in view of Temma and further in view of Floehr (USP 3,157,132). Applicant respectfully disagrees.

First, claim 9 depends upon the base claim 1, thus all the arguments regarding the patentability of claim 1 are equally applicable to claim 9.

Secondly, MPEP 2141.01(a) specifically states that in order to rely on a reference as a basis for rejection of an applicant's invention under 35 U.S.C. 103, the reference must be in the field of applicant's endeavor or be reasonably pertinent, i.e. it must be analogous prior art. Floehr discloses a hopper door pivot and latch assembly (Class 105: RAILWAY ROLLING STOCK, and class 16: MISCELLANEOUS HARDWARE (E.G., BUSHING, CARPET FASTENER, CASTER, DOOR CLOSER, PANEL HANGER, ATTACHABLE OR ADJUNCT HANDLE, HINGE, WINDOW SASH BALANCE, ETC.)). Thus, since Floehr has different purpose and structure, it is in the different field of endeavor, and is not reasonably pertinent; it is non-analogous and cannot be used as a teaching against the present invention.

Claims 10, 11, 15 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Barrett in view of Temma, further in view of Floehr, and further in view of Bakker (USP 5,967,919). Applicant respectfully disagrees. Claims 10, 11, 15 and 16 depend upon the base claim 1, thus all the arguments regarding the patentability of claim 1 are equally applicable to claims 10, 11, 15 and 16.

The Examiner noted that claims 12-14 were allowed. Claim 12 has been amended to correct minor informalities. No new matter has been added.

New claim 27 has been added.

For the foregoing reason, it is respectfully submitted that the pending claims are in condition for allowance, and notice to that effect is earnestly solicited. Should the Examiner believe further discussion regarding the above claim language would expedite prosecution they are invited to contact the undersigned at the number listed below.

Respectfully submitted:
Berenato & White, LLC

By: _____
George Ayvazov
Reg. N° 37,483

6550 Rock Spring Drive
Suite 240
Bethesda, Maryland 20817
Tel. (301) 896-0600
Fax (301) 896-0607